



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,274	06/28/2004	Masataka Ozeki	MTS-3506US	9342
23122	7590	05/06/2008	EXAMINER	
RATNERPRESTIA			WANG, EUGENIA	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	
			1795	
			MAIL DATE	
			DELIVERY MODE	
			05/06/2008	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/500,274	OZEKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	EUGENIA WANG	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the amendment filed August 9, 2007:
  - a. Claims 1-12 are pending with claims 10 and 11 being withdrawn as being drawn to an unelected invention.
  - b. The previous objection to the drawings is withdrawn in light of the amendment.
  - c. The previous claim objection is withdrawn in light of the amendment.
  - d. The core of the previous rejection is maintained, with any slight changes made in light of the amendment. Thus, the action is final.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/92050 (Yamanashi).

As to claim 3, Yamanashi teaches a fuel cell system that generates electricity via hydrogen gas (generated from methanol) (fuel) and oxygen gas (oxidizer) (p8, lines 9-15). There is a fuel reform reactor [120] (fuel processor) that produces the fuel to be supplied to the fuel cell from the fuel (via fuel injector [145]) (fig. 1). Combustor [140] (combustion device) combusts residual fuel gas that was unconsumed in the fuel cell

Art Unit: 1795

(seen in fig. 1). This action raises the temperature of the reactor (reform reactor [120]), since the exhaust gas (heated from the combustor) is ultimately delivered to the reform reactor [120] (fuel processor). Furthermore, the power manager [210] takes the electricity generated from the fuel cell stack [200] and delivers it to a motor (p 8, lines 24-28). The power manager [210] in conjunction with controller [300] acts as an electric power generation instructing means, as it (the power manager [210]) delivers the needed power via the fuel cell and a secondary battery to the motor, and thus inherently determines how much electric power is generated by the fuel cell in order to determine how much electricity is needed from the secondary battery to deliver to the motor (load), wherein the power manager is controlled by the controller [300]. Yamanashi's fuel cell system has power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines. The control of the fuel, water, and air flow rates would controls how much reactant is delivered to the fuel cell, and thus the rate at which power is generated and supplied. Therefore, the system of Yamanashi is capable of operating (and is thus configured to act) in such a manner that said electric power generation instructing means decreases the electric power generated by said fuel cell depending on the decrease of load power to be supplied, the rate at which the generated electric power is decreased depending on one of a) the change of the temperature and b) the temperature of the fuel processor.

It has been held that the recitation of an element is “capable” of performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

While intended use recitations and other types of functional language cannot be entirely disregarded. However, in apparatus, article, and composition claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). See also MPEP § 2114.

The manner of operating the device does not differentiate an apparatus claim from the prior art. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Note: The power manager [210] works in conjunction with controller [300] in order to provide the structure configured to perform the claimed functions.

Art Unit: 1795

As to claim 1, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate in a manner) such that the electric power generation instructing means decreases the electric power depending on the change of temperature of the fuel processor. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 2, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate in a manner) such that the electric power generation instructing means decreases the generated electric power at a first rate within a predetermined first limit while the temperature of the fuel processor is rising and at a second rate having no predetermined limit with the temperature of the fuel processor is not rising. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 4, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to

Art Unit: 1795

operate in a manner) where the electric power generation instructing means executes a first power limitation mode of preventing the decrease of generated electric power is executed when the temperature of said fuel processor is not lower than a first threshold value and the rate at which the generated electric power is decreased is not limited when the temperature of the fuel processor is not higher than a second threshold value which is lower than the first threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 5, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate) in a manner wherein the electric power generation instructing means releases the first power limitation mode when the electric power generation instructing means maintains or beings to raise the electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 6, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate in a manner) such that the electric power generation instruction means executes a second power limitation mode of decreasing the generated electric power at

Art Unit: 1795

a rate with a predetermined upper limit when the temperature of the fuel processor is not lower than a third threshold value, and the rate at which the generated electric power is decreased is not limited when the temperature of said fuel processor is not higher than a fourth threshold value which is lower than the third threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 7, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate) in a manner wherein the electric power generation instructing means releases the second power limitation mode when the electric power generation instructing means maintains or begins to raise the electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 8, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating (and thus is configured to operate in a manner) such that the electric power generation instructing means executes a first power limitation mode of preventing the decrease of generated electric power when the temperature of said fuel processor is not lower than the first threshold



Art Unit: 1795

value and executes a second power limitation mode of decreasing the generated electric power at a rate with a predetermined upper limit when the temperature of said fuel processor is not higher than the second threshold value, which is lower than said first threshold value and the rate at which the generated electric power is decreased is not limited when the temperature of said fuel processor is not higher than the fourth threshold value which is lower than the second threshold value. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 9, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable of operating (and thus is configured to operate in a manner) such that the electric power generation instructing means releases both the first and second power limitation modes when said electric power generation instructing means maintains or begins to raise the electric power generated by said fuel cell. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

As to claim 12, Yamanashi's fuel cell system with power manager [210], temperature sensor [122] of the reform reactor [120] (fuel processor), as well several of injectors [145, 151, 152] and flow rate valves [121, 141, 131] connected a control unit [300], as indicated by the dashed lines is capable operating (and thus is configured to operate in a manner) such that the rate at which the generated electric power depends

on the temperature of the fuel processor. For the Office's position on "capable of" for apparatus claims, please refer to the rejection of claim 3.

***Response to Arguments***

3. Applicant's arguments filed March 28, 2008 have been fully considered but they are not persuasive.

Applicant's arguments with respect to the independent and dependent claims are all directed to the fact that Yamanashi et al. does not teach a fuel cell electricity-generating device with elements that are "configured" to perform certain actions (i.e. decreasing the electric power generated depending on a decrease of load power to be supplied by the fuel cell (see p 8 of the remarks), etc.). Namely, Applicant argues that using "configured for" affects the claims in such a manner such that the actions that it is configured for is not functional language.

Examiner respectfully disagrees. First it is noted that Applicant is applying too narrow of a definition to "configured for" language. It is examiner's position that Yamanashi et al. is configured for performing all of the same functions as that of the claimed invention because the fuel cell system of Yamanashi et al. has all of the same elements of the claimed invention connected in the same manner. Accordingly, it is configured for performing the same actions as it is structurally the same. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22, 13 USPQ2d,

Art Unit: 1795

1320, 1322 (Fed. Cir. 1989). It is further noted that Applicant has not provided any argument or proof as to how the apparatus of Yamanashi et al. is physically different from that of the claimed invention. Examiner would like to reiterate the fact that in an apparatus case, the structure of the apparatus must be different, not the function. It is unclear how an electric power generation instructing means (controller [300] in conjunction with power manager [210]) which operates in a certain manner differentiates the structure, when the prior art includes all of the parts of the claimed fuel cell system connected in the same manner. Examiner is unsure how a fuel cell system with all the same elements connected in the same fashion would not be configured to perform the same function. Therefore, the rejection is maintained.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugenia Wang whose telephone number is 571-272-4942. The examiner can normally be reached on 8 - 4:30 Mon. - Fri., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. W./  
Examiner, Art Unit 1795

/Gregg Cantelmo/  
for E. Wang, Examiner of Art Unit 1795